6015/7015

III Semester 5 Year B.B.A.LL.B./B.Com.LL.B. Examination, March/April 2023 (December 2022)
BUSINESS STATISTICS

Duration : 3 Hours Max. Marks : 80

Instructions : 1. Answer any five questions from group (a) each question carries 10 marks.
2. Answer any five questions from group (b) each question carries 06 marks.
3. Use simple calculator only.

Q. No. 1. a) What are the different sources of data collection ? Explain all the primary methods. Marks : 10

Q. No. 1. b) Write a short note on scope of statistics. Marks : 6

OR

Q. No. 1. a) Represent the following data by percentage bar diagram. Marks : 10

Year	No. of Petrol cars	No. of Diesel cars
2013	50,000	30,000
2014	65,000	20,000
2015	45,000	25,000
2016	40,000	15,000
2017	70,000	10,000

Above table gives number of cars sold by a car manufacturing company in past five years.

Q. No. 1. b) Write a short note on tabulation. Marks : 6

Q. No. 2. a) Calculate Mean, Median and Mode for the following data. Marks : 10

Marks	No. of Students
More than 10	100
More than 20	92
More than 30	80

P.T.O.

More than 40	62
More than 50	40
More than 60	24
More than 70	14
More than 80	06
More than 90	00

Q. No. 2. b) Write a short note on Quartiles. Marks : 6

OR

Q. No. 2. a) Critically evaluate the importance of various measures of central tendency. Marks : 10

Q. No. 2. b) Find Harmonic mean. Marks : 6

X	f
124	5
129	18
134	20
139	7
144	3

Q. No. 3. a) The following table gives scores of two Students A and B in series of 8 exams. Marks : 10

Student A	Student B
32	10
28	80
46	20
60	75
70	65
55	15
40	17
45	70

Find which Student is more consistent.

Q. No. 3. b) Write a short note on Skewness. Marks : 6

OR

Q. No. 3. a) Define dispersion. Explain various measures of dispersion. Marks : 10

Q. No. 3. b) Calculate quartile deviation for the following data. Marks : 6

Income	No. of Persons
50 – 70	100
70 – 90	140
90 – 110	300
110 – 130	230
130 – 150	125

Q. No. 4. a) Obtain lines of regression for the following data. Marks : 10

x	y
5	13
7	14
9	16
1	18
3	11
4	10
2	17

Q. No. 4. b) Write a short note on Rank correlation. Marks : 6

OR

Q. No. 4. a) Define correlation. Explain different types of correlation. Marks : 10

Q. No. 4. b) Calculate Karl Pearson's coefficient of correlation for the following data. Marks : 6

x	y
3	5
6	1
2	1
0	3

Q. No. 5. a) Calculate Fisher's index number and verify it satisfies Time Reversal Test (TRT) and Factor Reversal Test (FRT). Marks : 10

	Base Year		Current Year	
Commodities	**Price**	**Quantity**	**Price**	**Quantity**
A	4	20	5	24
B	5	15	3	24
C	2	30	5	35
D	1	50	2	60
E	3	25	4	30

Q. No. 5. b) Write a short note on 'weights in index number'. Marks : 6

OR

Q. No. 5. a) Define index number. Explain different steps involved in the construction of index number. Marks : 10

Q. No. 5. b) Construct cost of living index from the following data. Marks : 6

Group	**Index**	**Weights**
Food	55	40
Clothing	20	10
Fuel	15	20
Rent	10	20
Miscellaneous	18	10